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Compliments
of the Author.

PECULIAR DISPLACEMENT OF THE ARM IN UTERO AT BIRTH.

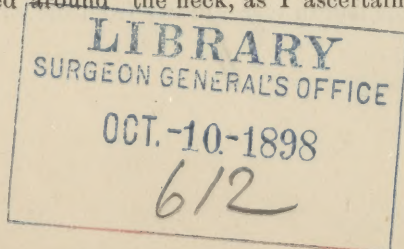
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[Read before the St. Louis Obstetrical and Gynecological Society,
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To report a very rare or unique case places one in a rather unpleasant predicament, particularly when there is no specimen whereby to prove one's assertions, since there are innumerable doubts, and an endless row of possibilities of error in observation, crowding the minds of his hearers. It is well that such is the case for one may observe honestly yet misinterpret what he has observed, and being misled himself may mislead others; therefore criticism should be applied unsparingly.

In the case I am to relate to you there is not only the absence of a specimen, but also absence of a professional witness to corroborate my statements. I shall therefore relate it just as it presented itself to me without further comment and let it stand upon its own merits or demerits, as the case may be.

Mrs. L. F.; primipara; æt. 28 years; very nervous, (terminating in a light attack of puerperal insanity); liquor amnii discharged completely the previous day at 11 o'clock P. M.; pains began at 2 o'clock P. M., on January 1, 1885. First stage, 11½ hours; second stage, 6½ hours. The child (male) was born at 7:30 A. M., January 2, weighing about 6½ pounds. Head presentation (L. O. A.), in which position the head was born, but when the shoulders presented the head stood in R. O. A., position. This spontaneous semi-rotation from first to second position, and vice versa, is a movement which may be relatively often observed. The umbilical cord was not wrapped around the neck, as I ascertained



by passing my finger from the thorax along the neck to the left ear. The space so crossed was found perfectly clear. The labor, though slow, was constantly and uninterruptedly progressing, and special assistance not called for. During a temporary lull in the pains, I proceeded to study the behavior of the shoulders in the process of their evolution, a subject which I had then under special consideration, and found, as intimated before, the left shoulder under the pubic symphysis, but though the shoulder was plump and round with a distinct axillary cavity underneath, yet there was apparently no arm attached to it. My first impression was that it might be the result of an arrest of development or of an intra-uterine amputation of the limb, but there being neither stump, nor



FIG. I.

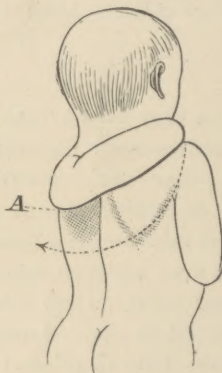


FIG. II.

cicatrix, nor rudimentary outgrowths present, I soon saw my error and searched for another explanation of the mystery. Passing my fingers from the shoulder towards the back of the child, a cylindrical ridge (the arm) was felt extending from the shoulder backward from left to right across the neck, where it terminated in a somewhat pointed body (the elbow) on the right shoulder, and there bending forward from right to left along the anterior part of the neck extended a similar ridge (the forearm) terminating in a hand, which rested on the thyroid cartilage. (See Figures I. and II.)

Then I understood that this was the missing arm. The anterior face of the whole arm and hand lay in close apposition with the neck all around, while the posterior surface was throughout its whole length turned away from the child. The hand rested under

the chin, the palmar surface over the larynx, the palm was extended, the little finger turned upward and the thumb downward, toward the sternum. Meanwhile the child was born to the hips, to which followed another calm. I supposed, as seemed so very probable, especially in a head presentation, that the arm had slipped over the head from above downwards and tried to slip it gently back again, when I discovered to my surprise that it would not move in this direction. This aroused my curiosity to a still greater extent and I began to investigate the case in full earnest. The shoulder, or the clavicle and acromion process, formed an obtuse angle to the neck, instead of nearly a right angle in the normal condition; in fact there existed a pronounced slope shoulder, with a well preserved axillary cavity underneath. From the posterior border of the shoulder could be traced the arm extending around the neck as stated above, while underneath the middle third of the humerus, in the position where the angle of the scapula should be was a marked depression (A Fig. II.) while the angle of the scapula itself was found in the spine near the vertebra prominens. The whole scapula had rotated on the subscapular muscles, partly dragging them along in its motion; the acromion process moving in the opposite direction to the angle also carried with it the scapular end of the clavicle and thus caused the inclination of the shoulder. On straightening the elbow and releasing the arm from the cervical depression, it was easily carried downward across the back from right to left, when everything resumed its natural position with a gentle snap. Before reducing the displacement I explained and showed the condition of the case to an aunt of the puerpera, who acted as nurse. Immediately after reduction I tried to reproduce the faulty position, using a moderate amount of force, but failed. This failure I ascribed to my want of knowledge of the exact mechanism of the primary process. The child used the arm and fingers just as well as those of the other side, almost immediately after the replacement. This case therefore was one of *spontaneous displacement of the whole arm from below upward over the posterior plane of the child, and during a head presentation.*

The authors of modern text-books on obstetrics, etc., content themselves by quoting a case first described by Simpson, while ancient authors do not mention the subject at all. Leishmann says: "A rare and curious cause of obstructed labor has been shown by

Sir James Simpson to arise from dorsal displacement of the arm. This may occur either in pelvic or cephalic presentations. In the former case, which is more frequent, it is probably due to an improper and imprudent dragging upon the limbs, the tendency of which is, as has formerly been shown, to allow the arm to pass up alongside of the head. * * *

In Simpson's case, the presentation was one of the head, in which the arm had in some peculiar way, which it is difficult to understand, got onto the nape of the neck, and was thrown transversely across the pelvis. The course suggested by him for the management of such a case is to bring the arm down by the side of the head.¹

"To quote more authors would be repetition."

The only description of displacements of the arm nearly resembling my case, I have encountered in Cazeaux's Midwifery. When speaking of the "difficulties of performing the pelvic versions," he says: "It is highly important to bear in mind that, according to the observations of Dugès, this crossing of the arms may take place in two ways, namely, they may be crossed behind the neck, after having been first raised up by the sides of the head, and then the overlapping is effected from above downwards and from before backwards, relatively to the fetus; or it may occur from below upwards, the arms then mounting up along the child's posterior plane, and becoming placed under the occiput. This latter circumstance may be produced in the following way: As the arms are usually located on the sides of the thorax, they may not participate in the movement of rotation impressed on the trunk in making an attempt to bring the anterior plane of the fetus towards the mother's loins; and consequently one or both of them may thenceforth be found placed on the child's dorsal plane. Then, supposing the tractions on the breach are continued, the arm will become arrested against the symphysis pubis, while the trunk descends or is extracted, in such a way as to be still there when the neck reaches that point. But these two cases can be distinguished from each other by remarking that, when the reversion of the arms has taken place from above downwards and from before backwards, the inferior angle of the scapula is necessarily removed to a considerable distance

1 Leishmann's System of Midwifery, 1879.

from the median line of the spine; while, on the contrary, *it will be quite close when the crossing has occurred from below upwards along the back of the fetus.*" [Italics mine.]

This, at least, proves the possibility of such a displacement of the arm as described above. In my case the accident was not probably a recent one, since the arm was not only comfortably lodged in the depression of the nape of the neck, and the elbow on the shoulder, but the forearm was flexed and snugly ensconced along the anterior part of the neck, and, so to speak, protected by the inferior maxilla. My case differs further from those mentioned by Dugès, by having occurred in a cephalic presentation, and without any manipulation that could have produced such a result. Besides the distinguishing signs between these two modes of displacement mentioned by Dugès, there may be added two more; though of lesser importance, they may be instrumental in recognizing the peculiar displacement when the others may be overlooked, namely, in the displacement of the arm from above downward the corresponding shoulder is elevated, while in displacement from below upward the corresponding shoulder is depressed. Secondly, In the former the axillary cavity is filled by the head of the humerus, while in the latter the depression is well preserved. Whether or not these will be of any practical use remains to be decided by future observation.

The labor was rather slow, considering the size of the child. The slow progress, which, by the way, was a constant but uninterrupted one, I thought was satisfactorily explained by the total absence of the liquor amnii, though I now think the displaced arm acted to a certain extent as an impediment to a more rapid delivery. The first stage of labor was unusually painful and, in spite of the administration of rather large doses of chloral, without a moment's intermission in the pains. The dry labor and consequent more or less intense contraction of the matrix around the irregular outlines of the fetus, and the absence of the dilating bag of waters, satisfactorily, though possibly wrongly, explained to my mind the existing condition. There was still another cause present to explain this state of things, and that is ante flexion with its usual sequels of protraction and painfulness of the first stage of labor, as explained in a former essay of mine.²

1. Cazeaux's Midwifery, American Edition, 1850, pages 653 and 654.

2 Effects of Ante-Displacements, etc.—Am. Jour. Obs., July, 1882.

How the displacement has occurred I am at present unable to explain. In fact I have not even a plausible theory, though it must have happened by a peculiar combination of circumstances during the prenatal gyrations of the fetus. I shall therefore leave it to the fertile imagination of my patient hearers to devise an explanation, which, however plausible, may yet be wrong. When once the attention is aroused as to the possible occurrence of this peculiar displacement, it may be met occasionally and may soon be satisfactorily explained. Since it may have a possible relation to the production of this displacement I shall mention, that after using Credé's method patiently for three-quarters of an hour, I was obliged to introduce my hand into the uterus and detach the placenta from a small point of attachment to the uterine wall and the membranes, which were extensively adherent, from within a diverticulum of the uterus.

The bearing of this contortion on the management of labor is almost insignificant, since the difficulties encountered during this act were sufficiently explained by other causes and, were it known beforehand to exist, nothing could be done to rectify it. Version would be worse than useless. Had the arm not been so completely protected by the opposite shoulder, the natural process of labor must have rectified the difficulty.

The only additional unusual condition I have observed that might lead to the supposition of the presence of this or a similar anomalous condition was, that during the passage of the head through the true pelvis, this (the head) was driven so forcibly towards the anterior plane of the fetus (flexion), or the right sacro-iliac synchondrosis of the mother, that on completing the rotation for the passage of the inferior strait, it appeared for a time unavoidable that the head would pass through the rectum rather than the vulva. The occiput refused for temporarily to adjust itself under the pubic arch and a rupture of the perineum seemed, for a while, to be imminent, though with due care the labor was terminated without more than slightly nicking the posterior commissure.

Having seen from the foregoing description that this particular displacement of the arm produced little or no impediment to the progress of labor, a lesson may be learned from it:

1. That, should it occur again in a cephalic presentation, it should be let alone, only good care should be taken to prevent rupture of the perineum by urging the occiput well under the pubic symphysis, and,

2. Should it occur with a pelvic presentation, since the arm cannot be brought down, it appears to me that it would be best to try to bring the forearm over the opposite shoulder and apply it, if possible, against the anterior face of the neck in fact imitate this case completely, depress and rotate the corresponding shoulder (that of the displaced arm) towards the perineum, thus the arm would offer the least resistance, and, as soon as the shoulders are born, could be freed from its malposition.

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 the arm In Utero At-Birth.
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